NEW YORK STATE MECHANIC.

A Journal of Science, Literature, the Manual Arts and Manufactures, News, &c.

VOL. II. ALBANY, NOV. 26, 1842. No. 1.

CIRCLE OF THE MECHANIC ARTS.

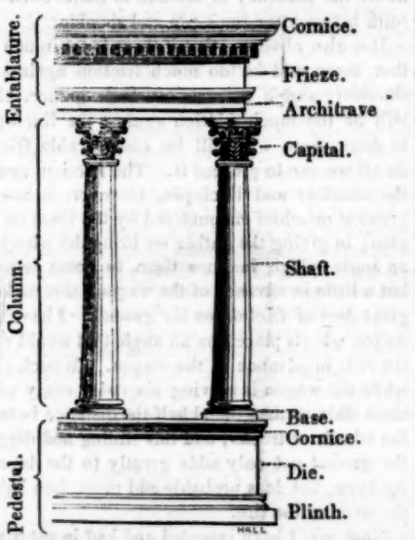
ARCHITECTURE.

In our first volume we commenced a series of articles on this inretesting science, tracing its progress from the earliest ages; but the requisition of business upon the time of the author, prevented the completion of the subject. It is now proposed to take it up in a different manner, and briefly illustrate the principles and practical results of the science. There will be nothing new perhaps to the accomplished architect; but there are numerous readers of this paper, no doubt, who are not so well acquainted with it as they should be, and who, perhaps, have been deterred from examining it by its formidable appearance in the books.

It has been too generally imagined that the study of architecture is of little or no use to any person, but those who are immediately concerned in building: nothing, however, can be more erroneous than such an idea, as there is scarcely any profession in which it is not, directly or indirectly, of the greatest importance. The knowledge of its beautiful proportions and ornaments, has given to many of the articles manufactured in this country a great superiority over those of any other nation. The proper application of its ornaments, aided by chemistry, enabled Wedgwood, to carry the porcelain manufacture to a perfection and elegance, till then unknown in Europe; affording a sufficient proof, if proof were wanting, of the utility this art may be in professions at first sight wholly unconnected with it. The smith, the cabinet maker, the turner, the founder, and in short every workman who has to give form to rude materials, will find it highly advantageous to devote a portion of his time to the acquirement of this sublime and useful art.

It being our intention in the present series to treat only of the practical part of the arts, it will not be necessary for us to enter largely into the history of architecture. We shall content ourselves therefore, with pointing out such circumstances as will account, in some measure, for the origin of, and the striking peculiarities which mark the different orders. These are five, the *Tuscan*, *Doric*, *Ionic*, *Corinthian* and *Composite*, which are distinguished from each other by the column, the base and the entablature. The novice will be enabled the better to understand the terms which are used to denote the different constituent portions by the accompanying engraving.

It is a very natural supposition, that in those climates, where rain seldom falls, it is unnecessary to guard so carefully against the inconveniences which attend exposure to the atmosphere, as in those more subject to wet. The primitive habitations, therefore, it is probable, were constructed with flat roofs, which were nothing more than poles laid from one tree to another, and covered with such materials as nature most readily presented, as brushwood, turf, leaves, or grass; these affording a sufficient protection in those delightful climates, where architecture first had its origin. As population increased, and agriculture



improved, it became necessary for the inhabitants of woods to seek situations in the open country, more favourable to their ocupations; hence other means for constructing habitations became necessary, and men finding the advantages of living in society; began to erect habitations of stone. These improvements being but gradual refinements on their rude huts, carried with them a portion of the character, which necessity, or rather convenience, first suggested. We may, therefore, conclude that the trunks of trees, set upright at proper distances, first gave the idea of a row of columns; whilst the bands or rings placed round them to prevent them from splitting, and a flat stone placed at the top and bottom to carry off the rain, and to give them a more solid bearing, may sufficiently account for the capital and base. The materials which constituted the covering, and which it is probable projected, and were laid on of a considerable thickness bear some resemblance to the entablature. The origin of the pediment is more obvious, having nearly the same offices assigned to it as gave it birth, namely, the angular or rising roof.

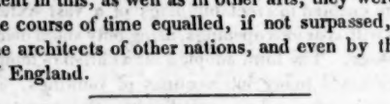
These observations on the origin of the column and entablature, are made with a view that all those who study architecture, may know the uses for which the different parts were originally intended. Though many of these have ceased to be necessary from the various improvements in the art, and others are so ornamented as to conceal their original design—it must never be lost sight of, that each member had originally its uses, which will prevent errors by the indiscriminate misapplication of them.

Most persons who have written on architecture, agree that the Greeks had their first ideas respecting it from the Egyptians. The latter, long before it was practised with any thing like order in Greece, had made considerable progress towards its perfection; but, though their works were grand, they were deficient in delicacy and tase. It was reserved for the Greeks to impart to this art elegance and symmetry, and to unite with these comfort and convenience. What we have said respecting the origin of Grecian architecture, may account for the peculiar character of the Arabian, Chinese, and what is commonly called Gothic. The last is the common appellation by which the architecture of the middle ages, is known. In the Arabian mosque, we cannot but see the strong resemblance it bears to a number of small bell tents, encircling a larger one. The caravansary is a court surrounded by small tents, each having its own dome, to which the Greek church of St. Sophia, at Constantinople bears a striking similitude. The Chinese architecture appears to be derived from the construction of wooden buildings; and Sir George Staunton informs us, that the roofs are of the same shape as the cover of a square tent. Thus we may trace the different styles of architecture to the formation of primitive huts; which were constructed so as best to afford the purposes of shelter or shade, as the climate in which they were erected demanded; and of the most abundant and best calculated materials to answer these ends. We must therefore look to these sources, if we wish to obtain a just jdea of the origin of styles, differing so widely from each other.

The architects who built most of the cathedrals in Europe, departed from the style of Greece, and Rome, and introduced another, in which arcades made the principal feature. Not finding in every place, quarries from which blocks could be raised of sufficient size for forming the far projecting cornices of the Greek orders, they relinquished these proportions, and adopted a style of ornament which did not require such projections. By substituiing arches for the horizontal architrave or lintel, they were enabled to erect buildings of a vast extent, and with spacious openings, using only small pieces of stone. The form adopted for a christian temple occasioned many intersections of vaultings, and multiplied the arches exceedingly. Constant practice afforded opportunities of giving all possible variety to these intersections, and taught the art of ballancing arch against arch in every situation. In process of time arches became principal ornaments, and a wall or a ceiling was not thought properly decorated, until it was filled with mock arches, crossing and cutting each other in every direction.

We call the middle ages rude and barbarous, and give to their style of Architecture the appellation of Gothic; but there was surely much knowledge in architects, who could execute such magnificent and difficult works as they have left us. More appropriate appellations for these species of Architecture, would be *Saxon* and *Norman*, so far as relates to buildings of this kind in Britain; the Saxon being distinguished by the circular, and the Norman by the pointed arch; for, under the guidance of these respective nations, each kind displayed its grandeur and peculiarities in the greatest perfection. The architects of whom we now speak do not appear to have studied the theory of equilibriated arches. For a long period, they adopt-

ed an arch which was very strong, and permitted considerable irregularities of pressure, namely, the pointed arch. The very deep mouldings with which this arch was ornamented, made the arch-stones very long in proportion to the span of the arch. They had, however, studied with great care the mutual thrust of arches on each other; and they contrived that every invention for this purpose should become an ornament, as well as a necessary part of the building. Thus we frequently see small buildings with buttresses on the sides. These buttresses are necessary in a large vaulted building, for withstanding the outward pressure of the vaulting; but they are useless when there is a flat ceiling. Pinnacles on the heads of buttresses, are now considered as ornaments; but, originally, they were put there to increase the weight of the buttresses. Even the great tower in the centre of a cathedral; which now constitutes its chief ornament, is a load almost indispensably necessary, for enabling the four principal colums to withstand the combined thrusts of the aisles, the naves, and the transepts. In short, the more closely we examine the ornaments of this style of Architecture, the more shall we perceive that they are essential parts; and the more we consider the whole style, the more we see, that it is all deducted from the relish for arcades, indulged to extremes, and pushed to the utmost limit of possibility in the execution. This pure Gothic was followed by a middle style, in which the Grecian and Gothic were blended together. Towards the end of the 15th and beginning of the 16th centuries, learning and the chaste architecture of the Greeks and Romans began to revive. It first dawned in Italy; and its revival may be atributed to the magnificent structures which were to to be found in that country. From thence an improved method of building was gradually introduced into all parts of Europe; and although the Italians for a long time retained the superiority over the other European nations as architects, yet as men of genius from all quarters constantly visited Italy, for the purpose of improvement in this, as well as in other arts, they were in the course of time equalled, if not surpassed, by the architects of other nations, and even by those of England.



COON'S AXLE ARM.

Having some experience, I propose to offer a few remarks on the hanging of a carriage wheel. Suppose the wagon to be loaded, the point of bearing is vertical, or directly downward, and on a right angle with the perch or pole. Now if the wagon could move without a draught, there would be no material friction at either end of the hub, that is, if the axle had no gather. Now apply a draught, and the weight is acted upon by two forces, and the point of bearing is movad a little forward of a perpendicular; hence it becomes necessary to incline the arm of the axle a little forward. which we call a gather, to prevent the wheel's running off. This tendency is in consequence of the axle's being tapering. The point of bearing being brought a little forward of a perpendicular, gives it an obtuse angle with the pole, and hence the wheel is inclined to run off.

Now the difficulty is, in giving the axle just enough gather to keep it easy between the shoulder and nut, or linch-pin; for if it is muddy, or you are moving on vexing ground, it will require more power to move the load, and consequently the point of bearing will be carried farther forward and the angle will become more obtuse; so that it is evident that the point of bearing is continually varying its angle in reference to the pole, and hence the tendency of the hub to move back and forth between the linch-pin and shoulder.

It is also obvious, that if there is too much gather, there will be too much friction against the shoulder; and if there is too little gather, there will be too much friction against the linch-pin; in short, there will still be considerable friction do all we can to prevent it. The friction against the shoulder and linch-pin, however, is not the greatest mischief encountered by the team on this plan; in giving the gather we bring the wheels on an angle which inclines them to come together but a little in advance of the wagon; this makes a great deal of friction on the ground. I have seen wagon wheels placed on an angle that would cross six rods in advance of the wagon. In such case, while the wagon is moving six rods, every wheel must slide on the ground half the distance between the wheels or tracks; and this sliding and digging the ground not only adds greatly to the labor of the team, but does probably add more than half to the wear of the tire.

Now, sir, I have invented and had in use a year or two, an axle arm that does away all this friction. It simply consists of straight bearings and straight boxes, the taper being in the middle of the arm, between the bearings. There is no gather necessary, and the wheel moves straight forward, with scarce any friction. An arm all the way of a size would do, but it would add a little more heft and the wheel would draw off hard.

Berlin, 1842. ASA COON.

CIRCULAR.

FELLOW MECHANICS—One year ago the undersigned took charge of the New York State Mechanic, by appointment of the State Association of Mechanics, in so far as to hold supervision of its character and faithfulness to the mechanic interests. How far the paper has redeemed its promises its readers must judge, and whether it meet the approval or not the committee are responsible for its course, having received every attention and courtesy from its able editor and publisher, and a full compliance with their expressed wishes. Their duties have not been arduous, however, as the practical knowledge of the publisher of the wants and deficiencies of the mechanics in the particular which this paper was intended to supply, and his enterprise, energy and perseverance in meeting these wants, has relieved the committee from much of the attention they would otherwise have had to bestow.

In commencing a new publication of this kind many obstacles and embarrassments are met at every turn, added to which the pecuniary embarrassments so general last year, and the lack of employment by such large numbers of mechanics, entered largely into the difficulties in the way of wide circulation and commensurate usefulness. Political prejudices started a thousand fears, and threw their wet blankets kindly over the enterprise, in expressions of regard and doubt, while the mechanics themselves have seemed to distrust their own capacity for any thing designed to raise their condition or maintain their rights. The press, too, unused to pay attention to the movements or interests of the mechanics, except as they are connected with general politics, and then by debasing appeals to their prejudices and passions, have but sparingly assisted in the movement, yet the paper has attained a respectable circulation, which but slight interest on the part of the mechanics in our cities and villages might increase to a very large amount, which would carry with it a corresponding increase of usefulness and interest. The terms offered by the publisher bring it within the means of every mechanic to obtain it, and the excuse of inability to pay for it must bring a blush to every cheek that urges it, if he have health and employment.

The committee would urge upon their fellow mechanics the small attention and cost required to extend the circulation of the only paper published in the empire state, devoted to their interests exclusively, as the readiest, easiest and surest way of remedying many of the wrongs which the mechanics as a body have so long contended with; and to Mechanic Associations particularly we would address our earnest entreaty to give the paper their consideration and confidence, affording as it does so ready an opportunity to circulate the doings, wants and benefits arising therefrom, a channel through which the mechanics can become acquainted with each other, in their general interests and movements, eliciting concert of action, which is strength of the surest kind, always commanding consideration and respect.

The committee also ask the mechanics to give their individual attention as correspondents and contributors. There is scarcely a mechanic who has not need of information upon his own business, at times, either in exploring causes or effects, or in obtaining information how to produce such effects as he desires. Here, then, is a medium for receiving as well as extending important knowledge, to not only the mechanic but to the whole community. Well tempered communications are always received with pleasure, not only by the publisher but by the readers. They are the very spice of papers of this kind, and every mechanic should contribute whatever he may chance to discover that is not generally known, and may be useful to any.

The committee again appeal to their fellow mechanics to give their confidence and assistance to the paper, knowing the need of such a publication, and determined on their part that it shall serve the interests of the mechanics, so far as their supervision of its course is concerned, relying at all times upon the expressed opinions of those by whom they hold their appointment, in directing their course. They need scarcely say that its course will not be directed by any creed or faith save that of fearless independence upon every question of policy or ground of right.

B. C. TRUE,
ALBERT DWELLE,
W. R. BUSH,
J. HOCHSTRASSER,
IRA PORTER,
Publishing Committee.

REGISTER OF PATENTS.

1. John B. Holmes, Boston, Mass., for improvements in machinery for *hoisting weights, &c.;*

2. Robert Hampson, Manchester, Eng., for an improved mode of *block printing* on various kind of fabrics, and for apparatus, &c., for that purpose.

3. Wm. F. Julian, Hartsville, In., for an improved mode of framing and *bracing the arms of paddle wheels* of steam vessels.

4. Collins & Wistar, assignees of Stacy Costill, Philadelphia, Penn., for an improvement in the machine for *turning straight, curved, or taper work*—such as fork and shovel handles.

6. Lowry & Eggleston, the former of North East, Penn., and the latter of Mayville, N. Y., for an improvement in the *saw mill.*

7. Benjamin H. Green, Princeton, N. J., for an improved mode of *fastening doors on the inside,* called the "Traveler's Security."

9. Geo. W. Wilson, Nashua, N. H., for improvements in *door locks and latches.*

10. Samuel H. Little, Gettysburg, Penn., for improvements in the *horse power.*

11. Charles W. Copeland, New York, for improvements in *marine steam engines.*

12. Sidney E. Coleman, West Haven, Vt, for an improvement in the *fulling mill.*

13. William Byrant, Nashville, Tenn., for an improvement in the *saw mill.*

14. Hernon Smith, Sunbury, O., for an improvement in the *rotary steam engine.*

15. Christian and Charles Richman, Philadelphia, Penn., for an improvement in the *lamp for burning oil and camphine.*

16. Edmond Morris, Burlington, N. J., for an improved *apparatus for, and mode of, feeding silk worms.*

17. Richard French, Philadelphia, Penn., for an improvement in the *spark arrester,* for the chimneys of locomotives, and other steam engines.

18. Prouty & Mears, Boston, Mass., for improvements in the *plough.*

19. Albert Washburn, Bridgewater, Mass., for an improvement in the *grates of cotton gins.*

20. Frederick J. Austin, New York, for an improvement in the machine for *trimming books.*

21. Benjamin Cushwa, Clear Spring, Md., for an improvement on his *self-acting log brace for saw mills.*

22. Garber & Swartzengrover, borough of Norristown, Penn., for an improvement in the process of *burning lime.*

23. Charles F. Hobe, New York, for an improvement in the *slides of extension tables.*

24. Arthur Wall, Shadwell, Eng., for a new *composition for coating metals to prevent corrosion.*

25. H. R. Walter, Norwich, N. Y., for improvement in the *washing machine.*

26. Nelson Johnson, Triangle, N. Y., for an improvement in the *water wheel* for mills.

27. J. H. Young, of England and A. Delcambre, of France, for an improved mode of *setting up printing types.*

28. Williams & Tew, Newport, R. I., for an improvement in the *lamp for burning lard.*

29. Leonard Phleger, Philadelphia, Penn., assignee of W. W. Hubbell, Moyamensing, Penn., for an improvement in the *spark arrester.*

30. Leonard Phleger, Philadelphia, Penn., assignee of W. W. Hubbell, Moyamensing, Penn., for an improvement in the *spark arrester* for locomotive and other chimneys.

31. Leonard Phleger, Philadelphia, Penn., assignee of W. W. Hubbell, Moyamensing, Penn., for an improvement in the *spark arrester* or depositor.

32. Leonard Phleger, Philadelphia, assignee of W. W. Hubbell, Moyamensing, Penn., for a *horizontal spark arrester* for locomotive and other chimneys.

33. Samuel Nicolson, Boston, Mass., for *railroad alarm signals.*

34. John Luther, Warren, R, I., for an improvement in *casting composition screws.*

35. Webster Harrick, Northampton, Mass., for an improvement in the *machine for hulling rice,* and any other kind of grain.

36. Henry Dircks, Liverpool, Eng., for an improvement in the manner of *constructing wheel for rail and other roads.*

37. John Thomas, New York, for an improvement in the *floating dry dock.*

GATHERINGS.

TALLOW CANDLES.

The season of the year has arrived when the economical house wife usually makes up the year's supply of candles. Few understand the best mode of dipping candles. Having had much experience in this business, I feel that I may render some of the readers of the Journal of Commerce a service by communicating the following directions.

Heat the tallow over a slow fire. When thoroughly melted, ladle it into the vessel the candles are to be dipped in:—let the vessel be as near full as to coat the wick within an inch of the top, and keep it at the same height until the candles are finished. By this means the candles will be of the same size at the top as at the bottom. When the candle wicks are lowered into the melted tallow, be particular that the tallow is not too hot:—the temperature should be such as that the finger can be dipped in without burning. When tallow is in this state, the wicks will take it up very fast. Lower the wicks down gradually, into the tallow, and raise them up *so slow* that when the bottom of the candles reaches the top of the tallow, no tallow will run or drop from the candles. If the candles are raised up rapidly, the melted tallow *will run a stream* from the candles; the candles will also have large butts and spindle tops. If the tallow is not clear, add a little pounded alum, when the tallow shall have become melted. This will cause all the dirt to rise in a thick frothy scum, and as fast as it rises, it should be skimmed off. If the candles are desired to be extra hard, to be used in very warm weather, a little bees wax or baberry tallow may be added, before finishing, to the melted tallow, and the candles dipped the two last dips in this mixture. This addition of wax must have more heat than tallow, as wax congeals at a lower temperature. A careful observance of these directions will be found to save more than half the labor usually consumed in dipping candles. Candles should be dipped in a moderately cool room. If the cold is very severe, the candles will crack. —*Journal of Commerce.*

SPOUTER VS. GRUNTER.

For some months I have been using lard oil, and have been much pleased with the clearness and brilliancy with which it burns; but it seems to me that Betty's announcement that "the *pig ile* is out," come too often, and I was induced to compare its burning with that of sperm oil, and the following is the result.

Two lamps of the same size and pattern, were filled and trimmed precisely alike, one with lard oil, which cost 75c. per gal., and the other with sperm oil, which cost 87½c. per gal. The lard oil burned ont in seven hours; the sperm oil lasted eleven and a quarter hours.—*Journal of Commerce.*

HARD COAL FIRES.

Apartments heated by Anthracite Coal, have a dry atmosphere. Rooms with low ceilings are more affected than those with high walls. Where stoves are used, persons usually temper the atmosphere by placing a vessel filled with water upon the stove, the evaporation of which fills the room with vapor. A vessel thus used, soon becomes incrusted, the water becomes putrid, and the vapour from it, nauseous, and unwholesome to breathe. This difficulty is easily obviated. Instead of water, fill the vessel with dry sand, such as is used for scouring. In it set an earthen bowl filled with clear pure water. This will evaporate gradually, and the atmosphere will be pure. The water in the bowl should be changed every day. Impure water thrown into the atmosphere of an apartment in the state of vapor, is as injurious to the animal system as the exhalations from a stagnant pond. Those who wish to have the atmosphere perfumed, may add a little lavender, &c. This is what chemists cell a sand bath.—*Journal of Commerce.*

EXTRAORDINARY CRANIA.

In the cabinet of natural history at Marseilles, there is preserved the craninm of a man, named Borghini, of very extraordinary dimensions. He died at the age of fifty, and was not quite four feet high. His head measured three feet round the sides, and 1 foot from the summit to the base. The intellectual faculties of this individual were not in proportion to the quantity of brain which nature had bestowed upon him, for tradition has yet kept up the proverb of, "as great a fool as Borghini." When he arrived at the age of manhood, he was obliged to support his unwieldy head by means of cushions placed upon each shoulder. A Moor resided some years at Tunis, whose head was of a most unusual size. His nose was four inches long, and his mouth so capacious, that he could put into it a middle sized mellon. This man was an idiot.

THOMAS JEFFERSON

When Mr. Jefferson came to Philadelphia in March, 1797, he was about forty-four years of age. His personal appearance as now recollected was this:—He was a thin tall man, over six feet in stature, neither full nor thin in body; his limbs were long and loosely jointed, his hair of a reddish tinge, combed loosely over the forehead and at the sides, and tied behind; his complexion was light or sandy; his forehead rather high and broad; his eyebrows long and strait; his eyes blue, his cheek bones high, his face broad beneath his eyes, his chin long and his mouth large; his dress was a black coat and light under clothes. He had no polish of manners, but a simplicity and sobriety of deportment; he was quiet and unobtrusive, and yet a stranger would perceive that he was in the presence of one who was not a common man. His manner of conversing was calm and deliberate, and free from all gesticulation: but he spoke like one who considered himself entitled to deference, and as though he measured what he said by some standard of self-complacency. The expression of his face was that of thoughtfulness and observation, and certainly not that of open frankness. When speaking he did not look at his auditor, but cast his eye towards the ceiling, or any where but to the eye of his auditor. He had already become a personage of some distinction and an object of curiosity, to every young man.

GEOGRAPHY.

The following curious passage is found in an ancient geographer, Pytheas, of Marseilles:—

"In the proximity of Great Britain, on the north side, distant about six days' sail, there appears neither land nor water, nor air, but these three elements confounded, forms a substance, which cements into composition, all the parts of the world. Neither vessels, nor persons on foot, can break this impenetrable substance."

This passage was treated as a fable by the Abbe de Longchamp, and other learned men, but particularly by the Benedictine monks, who published the *Literary History of France.* The substance, however, alluded to in the above passage, is unquestionably that immense masss of eternal ice which environs the poles, and which no navigator could ever yet pass. So that Cook and Lemaire have proved in our days by demonstration, that the ice forms an insurmountable barrier to any acces to the North Pole, appears to have been known even in the time of Pytheas, 2000 years ago. And the learned Benedictines unjustly derided a man, who appeared to them to relate a fabulous story; but which the sequel has proved to be a well established fact. The works of many ancient authors abound with passages still held as fabulous, but which may yet, perhaps, prove to be natural truths.

A friend of ours has been exciting our risibilities by relating a circumstance that took place on the railroad, as the cars were coming in the other afternoon. While the fire steed was putting in his prettiest licks; shooting along the track like a meteor: the engineer discovered far ahead a man swaying to and fro a large stick as if making signs. Supposing that some accident might have happened to the rails or that some impediment might be in the way, he prudently shut off the steam, and put on all force to check the progress of the cars, so that they came to a dead halt on arriving at the spot where the man stood.

"What's the matter?" enquired the conductor.

"Matter!" thundered the chap, brandishing his stick on high in token of defiance: "I've fought your lions, your tigers, and your wild roaring bulls of Bashan, and do you think I'm afraid of a d—d old cook stove on wheels!" It turned out that the fellow was crazy, and that he had escaped from a neighboring house where he had been confied.—*Portland Bulletin.*

We learn that Wm. Hemway, aged 22, was caught in the machinery at Capron's woollen mill, in Uxbridge, by one hand, and the hand and arm was torn off; one leg was crushed to atoms; the other leg was torn off to the knee, and his head was badly bruised. He was carried around by the shaft 250 times, and survived about 8 hours.

KNOWLEDGE FOR THE PEOPLE.

WOOLLENS.

Way was Spanish wool formerly so valuable?

Because it was the produce of the original stock, from which the whole of the Merino sheep now in existence have been drawn. This was from a flock transported from the Coteswold hills in England, to Castile, in 1464. Until within these few years, the only fine wool known was the Spanish wool, which, at that time, was supplied to England, France, and the Netherlands, for their fine cloth manufactures. But the ravages of war destroyed many flocks, and the original system of keeping the sheep was lost, so that the wool has degenerated into a quality not worth more than one-third of the same stock of sheep in Germany.

Why has Saxony become so celebrated for its wool-trade?

Because the late king of Saxony, when elector, introduced the breed of Merino sheep in Germany, which has since transferred the valuable trade in wool, almost wholly from the Spanish to the German soil. Thus, Germany realized in 1829, the sum of about $25,000,000 by the growth of wool, instead of the worthless hair produced upon the old indigenous sheep of the country, which was scarcely in sufficient quantity to supply the peasantry with worsted petticoats and stockings.

Why is European superior to British wool?

Because abroad the wool is grown without seeking any other result than wool,—whereas, in England, the farmer sacrifices every advantage of quality in the wool, to the necessity of exposing the sheep to inclement weather on the fallow land; and to the production of a fine fat carcass—both of which are incompatible with anything like excellence in the quality of the wool. If these motives did not exists the sheep would then be kept *for their wool;* but under so very different a mode of treatment, as to place it on a level with the Merino wool of Germany.

English historians generally attribute the establishment of the woollen manufactures in that country to the reign of Edward III., but according to the exchequer records, there were several guild fraternities of weavers established there so early as the middle of the twelfth century. Beyond this, Gervase of Canterbury, who wrote about the year 1202, says, when speaking of the inhabitants of Britain, that "the art of weaving seems to bo a peculiar gift bestowed upon them by nature."

Why does the prosperity of the wool-trade in France, depend on the exertions of the agriculturists to ameliorate the quality of the fleece?

Because the French government encourage the exclusive use of their own wool, by heavy duties on the raw material of other countries; and, accordingly, nearly four-fifths of the wool consumed in France is of native produce.

Why was the woollen manufacture of France so prosperous under Louis the fourteenth?

Because Colbert, the famous minister of that day, persuaded the king to offer a bonus of 2,000 *livers* for each loom at work, and to permit the nobility to enter into manufacturing speculations without derogating from their rank.

Why does each country of the earth produce its own peculiar wool or cloth?

Because every one has some breed of sheep or other, either indigenous to the climate, or naturalized by the inhabitants from some other part. Of these there is an endless variety, each producing a different quality of wool, from the Merino wool, grown in Silesia, down to the coarse, harsh, and brittle clothing of the sheep in tropical climates.

Why have the Gobelin manufactories become so celebrated?

Because they were originally established by Jean Gobelin, upon the river Bievre, near Paris, the water of which is considered very favorable to the process of dyeing. The family of Gobelin were, however, only dyers, although their name became attached to the quarter in which they lived, and even to the above river. They soon became rich, renounced their trade, and filled various offices in the public service.

Why were the Gobelin tapestries so named?

Because the successors of the Gobelins not only dyed wool, but made tapestries. Formerly works, of this kind were confined to Flanders, where the celebrated tapestry after Raphael's Cartoons was executed; but, at present, there is no manufactory equal to that of the Gobelins.

Why are the carpets of the Gobelins and the Savonnerie so highly prized?

Because of the length of time required to perfect them; sometimes five or six years. They are seldom valued at less than $900 or $1500 each. The largest carpet ever made at *la Savonnerie*, is probably that manufactured for the gallery of the Louvre. It consists of seventy-two pieces, and is more than 1,300 feet in length.

In carpet weaving, the wool passes through seventeen processes or sets of hands, to produce the warp. Thus, the fleece wool is sorted; then scoured; and combed by machine or hand. It is then run though a breaking frame and carding-engine; thence it is carried to various drawing frames, to produce regularity in the combined fibres; it is then made into a roving, and carried to the spinning-frame and made into single-worsted; afterwards double; and then ready for scouring and dyeing, warping and weaving.

Why are Cashmere shawls so successfully manufactured in France?

Because the breed of the Thibet goats has been naturalized there: und the French wool supplies the place of the oriental so perfectly, that all smuggling from India is at an end.

It is said that these shawls were brought into use by the officers of the army of Egypt after their return from the expedition so fatal to the Mamelukes, from whom a large quantity was captured. The rage then began among the French ladies for these beautiful articles, but their very high prices, as well as that of the wool of which they are made, prevented them for some time from being common. The raw material is supplied by the goats which browse on the plains of Khirgiz, whence it is brought to Moscow for sale, and it is calculated that a pound of this genuine wool, which hardly suffices for the chain of a shawl, cannot be imported thence to France, washed, picked, and spun, for less than $28.

Why is bombazeen so called?

Because of its corruption from *bombycina*, the Latin name for stuffs composed of a mixture of silk and woollen; and this term is from *bombyx*, silkworm, and *Sinæ*, China.

CHRONOLOGY OF SOME IMPORTANT INVENTIONS, &c.

Maps, globes and dials were first invened by Anaximander, in the sixth century before Christ. They were first brought into England by Bartholomew Columbus, in 1489.

Comedy and tragedy where first exhibited at Athens, 562 B. C.

Plays were first acted at Rome, 239 B. C.

The first public library was founded at Athens, 562 B. C.

The first public library was founded at Rome, 167 B. C.

The first public library was founded at Alexandria 287 A. D.

Paper was invented in China, 170 B. C.

The calendar was reformed by Julius Cæsar, 45 B. C.

Insurance on ships and merchandise, first made in A. D. 43.

Saddles came into use in the fourth century.

Horse-shoes made of iron, were first used A. D. 481.

Stirrups were not made till about a century after.

Manufacture of silk brought from India into Europe A. D. 551.

Pens first made of quills A. D. 635.

Stone buildings and glass introduced into England A. D. 674.

Pleadings in courts of judicature first introduced A. D. 788.

The figures of arithmetic brought into Europe by the Saracens, A. D. 991.

Paper made of cotton rags invented towards the close of the 10th century.

Paper made of linen in 1300.

The *degree of doctor* first conferred in Europe at Bologna, 1300; in England 1200.

The first regular *bank* was established at Venice in 1157. The bank of Genoa was established in 1407. That of Amsterdam in 1609. That of England in 1694.

Astronomy and geometry brought into England 1220.

Linen first made in England 1253.

Spectacles invented 1280.

The art of weaving introduced into England 1330.

Musical notes as now used, invented 1330.

Gunpowder invented at Cologne by Schwartz, 1320–40.

Cannon first used at the siege of Algeziras 1342.

Muskets in use 1370.

Pistols in use 1544.

Printing invented at Mentz by Guttemberg, 1440.

Printing introduced into England 1471.

Post office established in France 1464; in England 1531; in Germany 1641.

Turkeys and chocolate introduced into England from America in 1520.

Tobacco introduced into France by Nicot 1560.

First coach made in England 1564.

Clocks first made in England 1568.

Potatoes introduced into Ireland and England in 1568.

The circulation of the blood discovered by Harvey 1619.

The first newspaper published at Venice, 1630. First in France 1631. First in England 1665.

Coffee introduced into England 1641.

Tea introduced " " 1666.

The steam engine invented by the marquis of Worcester 1655.

Fire engines first invented 1663.

Turnpikes first made in England 1663.

Bayonets invented at Bayonne (whence their name) 1670. First brought into use at the battle of Turin 1693.

Stereotype printing invented 1725.

New style of calendar introduced into England 1752.

Air balloons and aerostation invented in France 1782.

The first mail carried in England by stage coach 1785.

The cotton gin invented in Georgia 1794.

Life boats invented in England 1802.

The first steamboat on the Hudson 1807.

The streets of London first lit with gas 1814.

SPECTACLES.

"Have you any first rate spectacles?" enquired a captious old fellow, of a spectacle vender.

"Oh, yes, sir, here is a pair calculated expressly for your age, sir, you can see through them, as plainly as when you were young, without them."

"Oh, I can't see through these at all."

"Well, here is another pair, sir, try these."

"Why, these are wosre than the others."

"Worse, did you say, sir?" Well, sir, here is a pair, sir, which I flatter myself will do you. There is not a superior pair in town."

"Pshaw! I can't see a stiver through them. Let me try another. No, these will not do; nor these either. You must have a singular lot of spectacles, sir."

"Ah! my dear sir, the fault is not in the spectacles, but in some peculiarity in your vision. Now, here, sir, is a pair, I have just been repairing, which I think will answer you exactly. They are not in very good trim, but their powers are incomparable."

"Yes, sir, these are the very ones—I can read with these quite easily—as easily as I could when I was young. What is the price of these? Ten dollars! Well here's the money, sir. I never had a pair of spectacles in my life, that suited me as well as these"—and away he went with a pair of spectacles on his nose, which *had no glasses in them.*—*Pittsburgh Sun.*

ALBANY, SATURDAY, NOV. 26, 1842.

☞ For *Business Notices*, see 7th page.

☞ On another page will be found the circular of the committee appointed to superintend the publication of the Mechanic, to which we wish to direct the reader's attention.

☞ The series of articles commenced on our first page under the head of *Circle of the Mechanic Arts*, will embrace Carpentry and Joinery, Masonry, Coopering, Cotton Manufacture, Founding, and indeed almost every trade, illustrated with engravings of some part of the machinery or tools used in each, and describing the most approved process of manufacture. Any one discovering errors or important omissions, will greatly oblige us by giving the result of his knowledge and experience.

TO THE MECHANICS.

It has been a matter of surprise and regret to us that the mechanics of her larger towns have not more generally followed the worthy example set in some few instances, and organized themselves into associations, for the double purpose of mental improvement, and concert of action on those points which may particularly interest them. The long nights of the winter season are now at hand, and to any reflecting mind the advantages to be derived from having some institution of the kind of which we speak, where, after his work is done, the laborer may now and then resort to listen to a discussion or lecture on topics of interest to him, must be apparent to all. We need but look around us to see the benefits which flow from these associations. Wherever they are established, and maintained with spirit, they are powerful instruments of good. The lecture system too, is becoming more general, and the talent and learning of the country is engaging in this popular method of instruction, with an ardor which betokens the dawning of a brighter day.

It is not to be supposed that the mechanics of every town and village will be enabled to get up an association that can rival some of those in our large cities, before which regular courses of lectures from the most eminent men, are annually announced—but they can form the nucleus round which will gradually gather a goodly band. If they cannot have regular courses of lectures they can at least have occasional ones, and because a greater good is nescessarily beyond their reach, they should not neglect the great good which is within it.

We may remark, in this connection, that it is a matter of gratulation that there is among us a few who are willing to make some sacrifices to promote the interests and welfare of the mechanics and laborers of our country. The field is white for the harvest, but the laborers are few indeed. It is true such men as Everett, of Boston, and Prof. Potter, of Union College, have volunteered in this glorious work, and their reward will be the grateful remembrance of millions of the free laborers of America—their monument will be more enduring than the empty flattery of the cold, deceitful marble—their memory will be graven deep in the warm hearts of their countrymen.

Yet these are not alone—there are strong arms and warm hearts coming to their support, from among the young men of our country. There are those who are girding themselves to take the task with an ardor that is a sure token of their success. Prominent among these is our fellow townsman, Mr. E. G. SQUIER, a gentleman whose name we doubt not is familiar to the ears of most of our readers. To him our paper has been indebted for much of the usefulness which we flatter ourselves it has accomplished during the past year, and we would advise our friends to avail themselves of his services, either in the organization of associations or in the furtherance of the objects of those already organized. It would require but a trifling effort on the part of the mechanics to defray the necessary expenses, and in such cases their invitations, addressed to the care of the publisher of the Mechanic, will meet a prompt response. Mr. SQUIER will probably make a tour of the river towns during the coming week, on business connected with the paper, and we trust our friends there will not neglect so good an opportunity to avail themselves of his aid, as a lecturer. Mechanics, arouse ye, and let not this winter pass unimproved.

MECHANIC INTERESTS.

A superficial observer of events will preceive, amid the surges of political action and the changing phases of society, which mark the present period of the world, a deep and wide spread revolution gradually but steadfastly moving onward in the condition and character of men. It is combined to no country, no form of government, no class of society, no special interest.

Its details may be observed in the political revelations of the day, the unholy usurpations and encroachments and firm resistance of power, the bold assumptions of fanatics and theorists, the clutches of the ambitious and lawless, the fearless assertion of rights the modifications of law and legislation, the clashing interests of communities and classes of men, the internal agitations of nations, the steady advancement of freedom, art, science and trade, and the constant conflicts of force and justice, of right and interest, of official wrongs and political ambition—all fomenting the passions, stimulating the selfish interests and arousing the physical energies of men.

History of various periods has revealed similar and not less signal throes of social elements and political change. That preceeding the era emphatically denominated "the dark ages," nor that which succeeded that gloomy period of mental and moral existence, nor yet that which in later times marked the dawning splendor of art, science and letters was more signal in its character and effects. An upheaving of society is every where beheld, and the hive of mankind is in commotion. The elements of the old world are deeply and fearefully agitated, and its people, the great and moving masses are boldly rising, in the defence and establishment of their rights and in their migration to a portion of the world where those rights are acknowledged and secured. Westward in truth is empire making its way, and is to be the vast field on which the great drama is to be enacted. Effective and enduring are to be the scenes here displayed to the world. A yet more fearful revolution and triumph are to be the final result. Discord will raise its hydra head and anarchy and petty powers are to signalize our history.

With these things in view, it becomes the duty of the great integral parts of American society to look around upon their acquired blessings, their national and inalienable rights, and interests. Whilst the benificence of our laws invite all and secure inestimable privileges to all of the old world who come among us, they contemplated no sacrifice of those blessings, no yielding up of our blood bought institutions, nor are our countrymen yet disposed to believe that such can be the final scene of the drama. But come what may among the events yet in the womb of time, there are interests, great and prominent interests, which it becomes us to assert and fix beyond the fear of ultimate overthrow. Dispersed as are the mechanics of our country, if there is one thing more just than another, it is that they should maintain their claims to influence and prosperity; for that there is a disposition to depreciate that influence, and limit that prospeitry, no reflecting observer will deny. It is but too common, as one of the evidences of this description, to elevate and laud those of the "learned professions," and for such to claim superiority and advantage over the mechanics and laboring men. Hence the great fear of legislating too much and of legislating for the interests of others rather than the producing classes. Why should the merchant, the lawyer, the *professor*, the speculator and the many others less useful in society, arrogate to themselves superior claims to power, honors and profit; can they appreciate what the mechanic, the farmer and working men require better themselves, the great basis of society on which all such must build, and by which they are elevated and supported? It is the constant tending of such to rise on the prostation of the honest mechanic and laborer. Not that they seek immediately to depress the mechanic, but that amid the revolution of the times and of circumstances, they, as a consequence of the affected disparity of their means and the distinction maintained by the one and too indifferently yielded by the other, they rise on the surface of all changes and revolutions of society. All history proclaims this, all the world shows it, and all men too quietly yield to it. Look back through the conflicting interests and impassioned struggles of men; all has borne directly forward to the establishment of these distinctions. Power has been acquired by the few, and those who have in truth obtained it have suffered most under its exercise. Legislators have been elevated by laboring men, not out of their number, but out of "the professions," and they are the first to experience the consequences of incapacity to legislate, practically, and the establishment of new and unjust distinctions. Look at all Europe at this moment, and look from the present to the establishment of the iron hand of power by the monarchists and the aristocracy. Every revolution has secured that power yet stronger, for power begets power, and every relinquishment of rights makes way for others; and what now is the melancholy result upon the face of society? Every distinction here made, and any right sacrificed by imbecility or in-

difference, digs still deeper the gulf which separates one class of society from another, and especially that great and useful class of mechanics, from "the learned professions." England, if we need a striking example of this fact, may be pointed at with fear and sorrow, nay, with scorn and indignation. But, let no *declared* equality satisfy the American mechanic that his fate may not be that of the miserable operative of England, and that those of the "privileged class" may not be those of the bloated aristocracy of that ill-fated country. No. Let every change, instead of creating new or confirming old distinctions, break asunder the chains that may have already been forged. The power to do this is in the hands of the mechanic—it is a silent but irresistible power. Let not the mechanic be cheated of it by mere party politicians, the promises of the interested, or the deceit of the privileged of any party. They should look well at all times, and more especially whilst change works the face of society, to the interests of the working and producing man, and remember that it will be his fault if those interests are sacrificed. Watch, then, mechanics, the onward march of change and revolution in your country, and suffer no interest to be lost sight of. No class is more liable to be overlooked or trampled upon, and no one, consequently, requires more caution, more firmness, more activity. To be ever ready, and prepared to take your stand in the maintainance of your rights and interests, to legislate or to exercise the functions of official influence, study to be informed of the elements of power, the character of society and the wants of the people. Let it not be said that there are not those in abundance among you qualified to discharge any duties of government and of social life, and at all times claim that share in both which your interests demand. Keep these things, like the polar star, ever in sight, and, whatever the changes in society may be, however rapid the march of revolution, or however conflicting the interests of the community, or of distinct classes, let not the great interests of mechanics sink in the struggle for predominance or favor. Not that we would have other interests sacrificed to any one particular class, or that undue preference and distinction should be instituted, but that those of the mechanic, which, as we have said, is of all others most liable to be disregarded, whilst it is one of the most important, should not be overlooked or depreciated. No. Society to move forward with "the greatest good to the greatest number," should move harmoniously, rightly appreciating and rightly encouraging each and every department of industry and labor. This is what we advocate, and this is what we call on mechanics to carry out at all times and under all circumstances.

SUB MARINE TELESCOPE.

The following account of a curious and we doubt not a useful discovery, we cut from the Commercial Advertiser. It is an improvement upon the old woman's plan of discovery "if the boys had not thrown nothing in the well." A mirror placed at such an angle as to throw its reflected light downward into the water must generally reveal the answer to the important question "where *has* them tin cups gone?" This we can attest, for when the mirror, went to the well *or* went to the woods, or, as was sometimes the case, the *wood* came to us. Sensibly, this is a contrivance for lighting up the dominions of the deep, invented by a lady, Mrs. Mather, of Brooklyn, who obtained a patent for her invention last July. It consists simply of a common lamp, enclosed in a glass globe about eighteen inches in diameter. The lamp, thus protected from the water, is, when submerged, supplied with air by means of tubes which rise above the top of the water. There is also a large tube between these two, for the escape of the smoke and gas from the lamp to the surface.

This instrument we saw in operation last evening, at the American museum, in a vessel of water about four and a half feet deep. A pin at the bottom could be as distinctly seen as though there had been no water in the vessel. The inventor says that objects have been as distinctly seen by means of the lamp alone, in our harbor, twenty-two feet below the surface, at a distance of from fifteen to twenty feet from the light. When the lamp is sunk lower than this, a telescope is needed. Objects may thus be descovered at almost any depth.

The aparatus it is thought will be very useful in the discovery of sunken wrecks, in the construction of fortifications, and all the works extending to the water. No vessel, it is predicted will, ere long, go to sea without it, as by attaching a mirror to the telescope, the bottom and keel of a ship may be examined when under full sail. This instrument has been seen and approved by several engineers and naval gentlemen.

EZEKIEL BACON ON STATE PRISON LABOR.

In the Northern Light for November appears an article from the pen of judge Bacon, of Utica, on state prison labor. To say that the writer knows very little of the subject on which he is writing, is to speak assuredly, as we can, in the case. The view taken of it is indicative of three facts: that he is profoundly ignorant of those principles of political economy involved, and of which he talks so learnedly—that he is equally unacquainted with the true state of the question and its bearings—and that he is utterly mistaken with regard to the ends sought to be attained by the opponents of the system. It is a matter of surprise to us that any one who has devoted so little attention to the subject should have the assurance to speak so dogmatically as does the author of the remarks before us. The question of state prison labor is not the trivial one that Mr. Bacon would have us believe, it is one that has commanded the careful attention of every writer of note on political economy, or criminal jurisprudence—it is one, too, which has been tested, and which is, therefore, beyond the reach of mere theorists—*facts*, stubborn and undeniable facts, can be adduced, which clearly demonstrate that the whole system, as it now exists, is wrong, and interferes with and injures the free mechanic, not in one way only, not his temporal interests alone, but his standing, as a member of a large and important class of society. We have not time to examine thoroughly this strange turn of false reasoning, this week, but it will claim our kind consideration at some future time not far distant.

"HONOR TO WHOM HONOR."—Having seen our city papers uniting in ascribing to Prof. Espy the invention of an important apparatus to prevent chimneys from smoking, permit me to inquire wherein it differs from that which we see upon our breweries, malt-houses, &c., and which has been in use for many years. From the account now published I can discover nothing more than an alteration in the *form* of the *old apparatus*, which, resting upon a pivot, is so constructed as to keep a vacuum constantly to the leeward, thus preventing the descent of wind into a chimney. If there is any thing more than this, let the professor have the credit of it; but, if it is only what I have mentioned, he ought not to claim or receive the praise due to an inventor. A MECHANIC.

CONUNDRUM.—Why should the music from the Opera of the Postilion be the oldest in the world?

Ans. Because it was composed by *Adam!*

G. D. W.

The Troy Budget, after quoting our remarks of the week before last, on the reduction of wages by the manufacturers, says:

"This is very apropos. But why did not the Mechanic raise the inquiry *before* the election? The facts were *then* equally notorious. Hitherto it has been chiefly tariff and protection."

The only answer to the *inquiry* of the Budget we have to make is, that we have a soul above the meanness of weighing such matters by their bearings upon an election. As to the notoriety of the facts, we have some misgivings on that point, since the mechanics themselves are silent. We have never heard the complaint from them directly. As for the last period of the Budget's comment, it is not clear to us whether it means to say that the *facts* have hitherto been all tariff and protection, or that the Mechanic has. In either case there is a mistake. We recommend the editor of the Budget to review his own columns with a little candor, on the tariff question.

POPULAR TECHNOLOGY; OR, PROFESSIONS AND TRADES.

A new and beautiful edition of this popular work, by Edward Hazen, A. M., has recently been issued by Messrs. Harper & Brothers, N. Y. The design is the simple one of giving a brief and comprehensive account of the various professions and trades, and is conveyed clearly enough in the title. It is intended chiefly for the younger portions of society, and, as a whole, is well adapted to their comprehension. Some portions, in our opinion, could have been much simplified, and that too without the least difficulty or detracting from the merits of the book in any manner. We would, however, cemmend the work to our readers.

INTELLIGENCE.

The steam boat Troy made her last trip to New York on Monday, and the day line has ceased.

The Mohawk and Hudson rail road has reduced its fare between Schenectady and Albany to 25 cents. We believe they started at 37½ cents, and rose to 75 in time. The stages had previously been run off the route, and they had a monopoly. The stages and the Troy and Schenectady road have brought them down.

Seventy new buildings have been erected in Newark, N. J., this season, or are erecting, including one church. About an equal number have been erected in New Haven, Conn.

A bill brought against the directors of the Western penitentiary in Pennsylvania for employing convicts at shoemaking, which the statute does not sanction, has been *ignored* by the grand jury. They are disposed to wink at the competition of convicts with honest men in Pennsylvania as elsewhere.

An American traveller speaking of the ruins of Balbec, says that three of the stones forming the base of the temple are 67 feet long and 12 feet square, and are raised twenty-five feet from the ground! Can any one versed in the mechanics of the present day guess the power that was applied by the builders in moving those masses?

The same writer, speaking of the swords of Damascus, "We saw a few of the famous swords, though none are made now, the art being lost; those we saw were two hundred years old or more, for their date is always 'worked in' in idelible characters near the hilt. They certainly are very beautiful things, and if I had 20,000*l*. a year I might have bought one. They cost about $150 apiece."

The long talked-of ship canal, uniting the Atlantic and Pacific oceans at the isthmus of Darien, has been commenced by the government of New Grenada. This communication will render the China voyage some 4000 miles less than at present.

Awful.—From the Pittsburgh Sun of the 19th, we learn that Titus Vespasian said "*Deim qyer didi.*" Now what in nater did he mean by that!

A chap in the West Indies advertises in a southern paper that he has a live mermaid which he is about to bring to this country. It is represented as a beautiful creature, "resembling a woman," all but the *tail*. All mermaids resemble the women; who ever heard of a male creature among them?

The boilers of the steam boat Chamois exploded on the Chattahoochie on the 11th inst., killing the engineer and two others, and seriously wounding several others. The boat is a complete wreck.

The tunnel on the line of the Sheffield and Manchester railroad, in England, will be three miles in length, upwards of six hundred feet below the surface or summit of the hill at it greatest height, and in rock formation throughout its entire length.

A girl in Worcester, Mass., has made two thousand dollars by working in a factory.

The secretaries of war and navy have, with the approbation of the president, issued joint regulations as to the working hours to be required in the armories, fortifications, navy yards, &c.

These hours are, May to September—from 6¼ to 6½, with one hour recess at 12 o'clock. For the remainder of the year, from 7 o'clock, or sunrise, when later than 7, to 6½, or at sunset, when earlier then 6¾, with ¾ of an hour's recess 12 o'clock.

A time roll will be kept, and ten working hours to be credited as a day.

The Columbus (Ga.) Enquirer learns by a gentleman direct from Chattahoochee that the steamer Gen. Harrison, Capt. Van Vechten, while endeavoring to force her way over a sandbar near the junction of the rivers, burst one of her boilers, by which three persons were killed.

Our whole national debt is less than sixty days' interest of that of Great Britain, yet, with all our resources, the English call us bankrupt!

Rope is manufactured with great facility at Nauvoo—where, many of the people think, it is needed.

Widows are singular creatures, they resemble green wood, which, while it is burning one side, is weeping the other.

Apples were never more abundant, or of better quality, than during the present year, at Cincinnati, Ohio. The best kind are selling at 75 and 80 cents a barrel.

The commerce of the New York state canals is greater than the whole commerce of the U. States in exports of domestic origin, by American vessels.

The Wesconsin Whig states that it is in contemplation to sink two shafts in the mines at Mineral Point and Dubuque, each five hundred feet deep, to test the question in relation to the under bodies of mineral supposed to exist in the mineral region.

It is said that the Farmington canal company, in Connecticut, have this year made their first dividend. They mowed the tow-path, and divided the hay.

Boston and Portland are now united by a railroad, a distance of 104 miles. The road was to be opened yesterday. Passengers leaving this city at 1 P. M. can sleep at Springfield that night and at Portland the next night.

On the 2d inst., the flouring and sawmills of Mr. Abraham Philips, on the Little Miami, Lebanon county Ohio, took fire and were entirely destroyed. The mills were occupied by Mr. Elliott, whose loss was about $2000, and that of Mr. Philips $3000.

The New York City Inspector reports 129 interments in that city last week—35 men, 40 women, 33 boys, 31 girls—under 2 years of 52. Deaths from consumption 14.

In Philadelphia there were 90 deaths—adults 26, children 64. Deaths from consumption 14.

The completion of the Baltimore and Ohio rail road to Cumberland, gives access to the iron and coal mines of Maryland, which are extensive and of good quality. The coal is of the bituminous kind.

The extensive works recently completed at Wilkesbarre, Pa., for making and rolling iron, were put into operation on the 12th inst. Iron was made into blooms during that day. Anthracite coal was exclusively used in the puddling and heating process.

There has been recently found, says a Belgian journal, amongst a heap of old books, purchased at St. Trond, the sixth known copy of the first Bible printed at Mentz. One copy was purchased in 1817 by Louis XVIII, for 20,000f.

A little iron hulled steamer propelled by an Erickson screw fixed in the bow, passed through the canal at this place Tuesday, and attracted considerable attention. She is about the size and shape of what in the canals are called "lake boats." She is of a beautiful model, and glided through the water very smoothly, creating scarcely any swell while going at the rate of six miles per hour, as she was when she passed through the canal here, with fifty tons of freight on board. As an *experiment*, we think this boat will prove more successful than any of the numerous steamers that have been tried on the Erie canal.—*Utica Gaz.*

The latest accounts from Metamoras state that the Mexican forces under general Woll, having retreated from the soil of Texas, were on the other side of the Rio Grande.

BUSINESS NOTICES.

☞ All letters and communications intended for this paper should be *post paid to secure attention.*

☞ With the last paper a large number of subscriptions terminated. As there are undoubtedly some who may wish to continue, the next paper, commencing the second volumn, will be generally sent to them. It is hoped that they will mostly continue their patronage, and contribute the small amount required, and thus keep one paper of the kind in existence. Below will be found the terms for the ensuing volume, by which it will be seen that members of associations and companies may save enough to pay a part or the whole of their postage, by clubbing together and having the bundle sent to one of the company, at a reduced price. If there should be any who do not feel willing to do so much, or rather so little, for the common cause, they will please to return the paper through the post office, otherwise it will be taken for granted that they wish it continued.

Terms for vol. 2.—To clubs of 20 or more, having the paper sent in one package, $1 each per annum, in advance.

To clubs of not less than 5, sent as above, $1.25 each, in advance.

Single subscribers $1.50, in advance.

Members of the state and county or town associations, subscribing through the secretary, are entitled to the paper at $1 per annum, in advance.

Subscribers who do not pay in advance, $2 per annum.

BINDING.—Subscribers wanting their volumes bound, can have them done in any style and at reasonable prices, by leaving them at this office.

☞ It is very common for agents to be told by those to whom they apply for subscriptions, that they have resolved not to pay any money in advance, as they once subscribed for a work that stopped before the time was up. We will state a fact to such careful ones which may be new to them. It is this—that the amount which any subscriber has lost by publishers in advance payments compared with that which publishers have lost by trusting subscribers, is as *eighteen pence to the capital of the bank of England.* Let no man allow so absurd a prejudice to get the better of his philanthrophy, when solicited to patronize a *good and useful work*—for he may rely upon it that the work will not stop until the losses of the publisher amount to a great many subscriptions; and the satisfaction of having aided a good enterprise is more worth to a man of soul than the eighteen pence he has parted with!

☞ The next most absurd plea to that which we have just annihilated, and one which is as frequently made by mechanics for not supporting a paper of their own, is the want of ability to pay. Now to obviate this objection, we pledge ourselves to furnish *every* mechanic in the state of New York with this paper gratis, who will produce satisfactory evidence that he does not spend the same amount (three cents!) every week in a more useless way!! That's supplying the poor gratis. We wish those who make this plea to reflect whether they are as prudent in all matters of expense as they are in this one.

EMPLOYMENT WANTED.—A widow, with three small children, in destitute circumstances, is desirous to obtain employment. She is a dress and corset maker and can do any kind of plain sewing. Her residence is the first door north of the Green st. Baptist church. Any favors bestowed upon her will be gratefully received.

BOOK BINDING.—HARVEY H. CORNING, sign of the golden ledger, 82 State street, Albany, carries on the above business in all its various branches, viz: PLAIN, EXTRA and SUPER EXTRA—has a first rate RULING MACHINE and other necessary implements for manufacturing BLANK BOOKS of every description, on the most reasonable terms, of the best materials and workmanship.

N. B. An assortment kept on hand. 27.

LEATHER, OIL, AND FINDING STORE,

No. 18 *Hudson Street.*

J. HOCHSTRASSER,

Willcontinue the above business at his old stand, and having madearrangements with manufacturers of Leather and Morocco in the cities of NEW-YORK, PHILADELPHIA, and ALBANY, and having in his employ first rate workmen, he is enabled to supply his customers with all the articles in his line on the most reasonable terms, at *Wholesale* or *Retail*, the following are included in his assortment: Oak and Hemlock Harness, Bridle, Collar, Horse, Trunk, Valise and Skirting Leather; Hog Skins, Philadelphia Russet Bridle, do. Facing Skins, do. Lining Hides, do. Top Hides, Patent Leather, Couch Roans, Neats Foot and Liver Oil, Currier's Tools, Oak Sole Leather, Hemlock do., Wax and Grain Upper Leather, do. Calf Skins, Keen's Philadelphia do., Seal and Kip Skins, Splits and Wealt Leather, Cordovan, Red, Green, White and Yellow Linings, Goat and Sheep Binding Skins, White Alum Dressed Linings, Dressed and Undressed Morocco, Colored Goat and Sheep Skins, English Shoe Thread of all numbers, India Rubber and Patent Cloth, Apron Skins, Stock Binding, &c.

N. B. An assortment of SHOE MAKER'S FINDINGS will be kept on hand.

Also, *Roller Skins, Engine Hose, Band, Picker, String,* an *Patent Leather,* on hand and made to order. *Albany,* 1841.

MISCELLANY.

THE PAUPER'S DRIVE.

There's a grim one-horse hearse in his jolly round trot;
To the churchyard a pauper is going, I wot;
The road is rough, and the hearse has no springs,
And hark to the *dirge* that the *sad* driver sings:—
"Rattle his bones o'er the stones:
He's *only* a pauper whom nobody owns!"

Oh! where are the mourners? Alas! there are none;
He has left not a gap in the world now he's gone;
Not a tear in the eye of child, woman, or man;
To the grave with his carcase as fast as you can!
"Rattle his bones o'er the stones;
He's *only* a pauper whom nobody owns!

What a jolting and creaking, and splashing and din!
The whip how it cracks, and the wheels how they spin!
How the dirt, right and left, o'er the hedges is hurl'd!
The pauper at length makes a noise in the world;
"Rattle his bones o'er the stones;
He's *only* a pauper, whom nobody owns!"

Poor pauper defunct! he has made some approach
To gentility now, that he's stretched in a coach;
He's taking a drive in his carriage at last;
But it will not be long if he goes on so fast!
"Rattle his bones o'er the stones;
He's *only* a pauper, whom nobody owns!

You bumpkin! who stare at your brother convey'd,
Behold what respect to a claddy is paid,
And be joyful to think, when by death you're laid low,
You've a chance to the grave like a *gemman to go*,
"Rattle his bones o'er the stones;
He's *only* a pauper whom nobody owns!"

But a truce to this train,—for my soul it is sad,
To think that a heart, in humanity clad,
Should make, like the brutes, such a desolate end,
And depart from the light without leaving a friend!
"Bear softly his bones o'er the stones;
Though a pauper, he's one whom his Maker yet owns!

DOUGLAS'S EXPEDITION TO THE HOLY LAND WITH THE HEART OF BRUCE.

It is well known that Bruce, being unable to perform a pilgramage to the Holy Land, determined that his heart should be sent there and buried. Douglas was entrustied with the mission; who, as soon as the season of the year permitted, having the heart of his beloved master under his charge, set sail from Scotland, accompanied by a splendid retinue, and anchored off Sluys in Flanders, at this time the great seaport of the Netherlands. His object was to find out companions with whom he might travel to Jerusalem; but he declined landing, and for twelve days received all visiters on board his ship with a state almost kingly. He had with him seven noble Scotish knights, and was served at table by twenty-eight squires of the first families in the country. "He kept court," says Froissart," in a royal manner; with the sound of trumpets and cymbals; all the vessls for his table were of gold and silver; and whatever persons of good estate went to pay their respects to him were entertained with the richest kinds of wine and spiced bread. At Sluys he heard that Alonzo, the king of Leon and Castile was carrying on war with Osmyn, the Moorish governor of Granada. The religious mission which he had embraced, and the oath taken before leaving Scotland, induced Douglass to consider Alonzo's cause as a holy warfare; and before proceeding to Jerusalem, he first determined to visit Spain, and to signalize his prowess against the Saracens. But his first field against the infidels proved fatal to him, who in the long English war, had seen seventy battles. The circumstances of his death were striking and characteristic. In an action near Thesba, on the borders of Andalusia, the Moorish calvalry were defeated; and after their camp had been taken, Douglass; with his companions, engaged too eagerly in the pursuit, and being separated from the main body of the Spanish army, a strong party of the Moors rallied and surrounded them. The Scottish knight endeavored to cut his way through the infidels; and in all probability would have succeeded, had he not again turned to rescue Sir William St. Clare, of Roslin, whom he saw in jeopardy. In attempting this he was inextricably involved with the enemy. Taking from his neck the casket which contained the heart of Bruce, he cast it before him, and exclaimed with a loud voice," Now pass onward as thou wert wont, and Douglass will follow or die!" The action and the sentiment were heroic; and they were the last words and deed of a heroic life, for Douglass fell overpowered by his enemies, and three of his knights, and many of his companions were slain along with their master. On the succeeding day, the body and the casket were both found on the field and by his surviving friends conveyed to Scotland. The heart of Bruce was deposited at Melrose, and the body of the "Good Sir James," the name by which he is affectionately remembered by his countrymen, was consigned to the cemetry of his fathers in the parish church of Douglass.

TO A RAT.

[CAUGHT IN A PRINTING OFFICE.]

Thou long-tailed, ebon-eyed, nocturnal ranger!
What led thee hither among types and cases?
Dost thou not know that running midnight races
O'er standing types is fraught with imminent danger?
Did hunger lead thee?—Did'st thou think to find
Some cheese Parmesan to delight thy maw?
Vain hope!—none but a literary jaw
Can masticate our cookery for the mind.
Perchance thou has a literary taste—
A love for letters, and that sort of thing:
But why, thou wire-tailed imp—thou vermin king!
Did'st thou but yesternight devour our paste,
And throw our types in pyramids of *pi!*
They doom's decreed!—Come, Towser! at him fly!

THE AGE OF CHEAP READING.—Astriking indication of the mighty resources for the good or evil, which the press contains, is afforded in the recent re-publication of Dicken's new work. In less than sixteen hours after its arrival in this countr, it was re-printed, published, and the two volumes, sold in England for six dollars, were selling for one shilling. A new and astonishing element of moral power is here developed—acting with a rapidity, force and omnipresence, which has no parallel in human efforts. At present it may be greatly perverted; but the time is not distant, when its wonderful agency shall contribute to the moral birth of a nation in a day.

SALUTATIONS.—It is true much may be learned, as to the dispositions of a people, from the mode of their social addresses. In China they ask, "Have you eaten your rice?" for this article with them is an indespensable. If two Dutchmen meet in the morning, they wish each other a good appetite. In Cairo, the inhabitants inquire—"How do you sweat?" since the want of perspiration is with them symptomatic of approaching fever. The Italian, or the Spaniard, asks—"How does it stand?" A Frenchman inquires, "How do you carry your self?" The Englishman, "How do you do?" In the three latter salutations we perceive the characteristic reference to—show, reflection and activity. Frequently the Hollander asks, "How do you fare?" Among the New England people the form somewhat varies. "How are you?" is the usual mode of salutation.

A POETIC PAINTER.—A tavern keeper who was by trade a blacksmith, engaged a painter to furnish a sign which should be appropriate to both branches. The painter soon appeared with a large board, on the border of which were painted a variety of glasses, horse shoes and tools, and in the center the following poetic notice:—

I shew the hoss, I shew the ox,
I keep my tools within my box,
I make the nails, I make the shew,
And entertain some strangers tew.

Be and continue poor, while others around you grow rich by dishonesty. Let others fill the offices that can only be obtained by mean servility. Wrap yourself in your own virtue, and seek a friend and your daily bread. If in such a course you have grown gray with unbleached honor, bless God and die.—*Heintzleman.*

"If there is any man who may eat his bread at peace with God and man, it is that man who had brought that bread out of the earth by his own honest industry. Is cankered by no fraud, it is wet by no tear, it is stained by no blood."

When heart and purse are put into the scales, heart usually kicks the beam. Down comes cash, up goes heart, so hard that it often breaks in the rebound.

PATENT AGENCY AND MECHANICAL ENGINEERING, *Office on F street, between 7th and 8th streets, opposite the Patent Office, Washington City, D. C.*—The subscriber has resigned his situation in the patent office (where he for some time superintended the restoration of patents destroyed by fire in 1836) to devote himself to the preparation of specifications and drawings, and all matters connected with the obtaining of patents for useful inventions either in this country or Europe. His experience in theoretical and practical mechanics, together with an intimate knowledge of the progress of the useful arts and manufactures, at home and abroad, will enable him to judge of the novelty and utility of inventions submitted to his examination; and as patents are not granted, under the existing patent laws, when the alleged inventions are wanting in novelty, or contravene the established laws of science, he will be able to furnish all the information necessary to avoid the expense of making application for patents which could not be granted.

Having established a foreign correspondence, he will be able to secure patents in Great Britain, France, and other parts of the continent, or furnish information, and prepare all the necessary papers for that purpose.

A model for a machine or apparatus, or specimens for a composition of matter, are required by law, before a patent can issue; by sending a model or specimens to the subscriber, with a short statement of the object of the invention, the necessary papers and drawings will be prepared and forwarded to the applicant for execution, thereby obviating the expenses consequent upon a journey to Washington, or delay in issuing the patent.

Being well acquainted with the patent laws of the United States, England and France, and the decisions of the courts in patent cases, he tenders his services where information is required in reference to infringements of patents, or defence against suits for infringement, such as compiling and arranging evidence, &c.

To individuals and companies wishing to procure drawings and estimates of machinery, or buildings, for manufactories, on the most modern and improved plans, or any other matter connected with mechanical engineering, he will furnish information; and, should it be required, will locate and superintend structures of this description.

Wishing to be generally useful to mechanics and inventors, he will attend to the sale of machinery and patent rights; this, being a place of resort from all parts of the Union, is perhaps the best location for such a purpose.

Papers relating to patents can be sent to the commissioner of patents, when voluminous, free of postage, and models sent to the collectors of the principal ports, will also come free of expense, and the subscriber can be advised thereof by letter, which in all cases must be post paid. All applications for information relating to patents must be accompanied by a fee of five dollars; charges for other business transactions will be made according to their magnitude. J. JAMES GREENOUGH.

Certificate of HON. H. L. ELLSWORTH, *Commissioner of Patents.*
PATENT OFFICE, NOV. 20TH, 1842.

Mr. *J. J. Greenough*, who has for some years been employed in the patent office, in a highly responsible situation, under the act of 1836, restoring the records, having to my regret tendered his resignation, I take great pleasure in recommending him as a gentleman worthy of confidence, and as being particularly qualified to take charge of any business requiring a knowledge of mechanical science, the progress of the arts, and patent improvements. Mr. Greenough is also well acquainted with the practice of this office. HENRY L. ELLSWORTH.

REFERENCES.—Hon. S. Prentiss, of *Vt.*, U. S. Senate; Hon. J. P. Kennedy, of *Md.*, U. S. House of Rep.; Hon. John C. Clark, of *N. Y.*, U. S. House of Rep.; Hon W. Cranch, *Chief Justice, D. C.*; J. W. Hand, Esq., *Chief Clerk, Patent Office;* C. M. Keeler, Esq., *Examiner, Patent Office.*

WEAVER & RICHARDSON, Umbrellas and Parasols made, covered and repaired, in the neatest and most durable style, at No. 66 Green street, Albany, opposite the first Baptist church. N. B. Umbrellas can be furnished by the dozen at short notice. 47

AGENTS WANTED.

Mechanics out of employment may find it a paying business to solicit subscribers for this paper in their vicinities and among their friends. Applications, post paid, directed to this office will meet with attention; they should be accompanied by certificates of character and responsibility.

The following local agents are authorized to receive subscriptions and money for this paper.

Messrs. Wells & Webb, 42 Ann street, New York.

G. H. Osborne, Poughkeepsie	P. P. Cleveland, Skeneateles
James Hegeman, Troy	Chas. White, Auburn
J. M. Edgerton, West Troy	Chas. Coy, Canandaigua
J. B. Gilson, Waterford	John Williams, Cazenovia.
Thos. Eaton, Bath, Me.	Jas. Goddard, Truxton
Andrew Hanna; Utica	M. W. Heming, Geneva
N. G. Brown, Milltown	Luther Moore, Rochester
Wm. Burton, Cohoes	T. S. Hawks, Buffalo
S. Lewis, Honeoye	Geo. Francis, Waterloo

Postmasters will forward subscriptions and money free of expense, as the law authorizes them to do.

PRINTING.—Every kind of letter press printing will be done to order on short notice at the office of the Mechanic, in the best manner and at reasonable prices. Business, visiting and wedding cards executed in a superior style on an hour's notice. New and fashionable type for books and pamphlets; hand bills of every size and style; circulars, bill heads, &c. &c.

NEW YORK STATE MECHANIC,

A weekly paper, devoted to the interests of Mechanics and Manufacturers,

IS PUBLISHED EVERY SATURDAY,

By JOEL MUNSELL,

No. 58 State Steet, Albany,

At $1.50 per annum in advance.